CLAIMS:

Sub Cl 1 (handwritten)
Cc 31 (handwritten)

1.   A digital still camera, comprising:

an image sensor mounted in a housing for receiving light and generating output signals representative of an image of an object or a scene of interest;

4   a processing circuit mounted in the housing and connected to the image sensor for processing the output signals from the image sensor;

6   a memory mounted in the housing;

a control circuit mounted in the housing and connected to the processing circuit for

8   successively generating a plurality of image files corresponding to a plurality of images and storing the image files in the memory in accordance with a selected one of a plurality of picture

10   modes, the control circuit determining a remaining picture count after each image file is generated based on a predetermined decrement number corresponding to each image file; and

12   means mounted in the housing for indicating the remaining picture count to a user.

2.   The camera of Claim 1 wherein the indicating means includes a display for

2   providing a visual representation of the remaining picture count.

3.   The camera of Claim 1 wherein the predetermined decrement number

2   corresponds to a size of the image file.

4.   The camera of Claim 3 wherein the control circuit uses a look up table to

2   retrieve the predetermined decrement number corresponding to each image file size.

5.   The camera of Claim 1 wherein the control circuit utilizes a plurality of look up

2   tables each corresponding to one of the plurality of picture modes.

6.   The camera of Claim 1 wherein the control circuit causes the indicating means

2   to indicate that the remaining picture count is zero when the control circuit determines that a remaining capacity of the memory is insufficient to store an image file of a predetermined

4   maximum image file size.

7.   The camera of Claim 1 the control circuit compresses an output from the

2   processing circuit in generating the plurality of image files.

8.   The camera of Claim 1 wherein the plurality of picture modes includes a plurality

2   of picture resolutions.

9.   The camera of Claim 1 wherein the plurality of picture modes includes a plurality

2   of data compression levels.

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10.   The camera of Claim 1 wherein the plurality of picture modes includes a plurality of pre-set combinations of a selected one of a plurality of picture resolutions and a selected one of a plurality of data compression levels.

11.   A method of operating a digital still camera, comprising the steps of:
selecting one of a plurality of picture modes on a digital still camera;
taking a picture with the camera;
storing an image file representing the picture in a memory in the camera in accordance with the selected picture mode;
determining a remaining picture count based on a predetermined decrement number corresponding to the image file; and
indicating the remaining picture count to a user.

12.   The method of Claim 11 wherein the indicating step is performed by providing on the camera a visual representation of the remaining picture count.

13.   The method of Claim 11 wherein the remaining picture count is initially determined based on a capacity of the memory before any image files have been stored in the memory and thereafter the remaining picture count is decremented after each image file has been stored in the memory by a predetermined number corresponding to a size of the image file just stored.

14.   The method of Claim 13 wherein the predetermined decrement number corresponding to each image file size is retrieved from a look up table.

15.   The method of Claim 11 wherein the image files are stored in a removable memory.

16.   The method of Claim 11 and further comprising the step of indicating that the remaining picture count is zero when a remaining capacity of the memory is determined to be insufficient to store an image file of a predetermined maximum image file size.

17.   The method of Claim 11 and further comprising the step of compressing a set of pixels representing the picture to produce the image file.

18.   The method of Claim 11 wherein the plurality of picture modes includes a plurality of picture resolutions.

19. The method of Claim 11 wherein the plurality of picture modes includes a plurality of data compression levels.

20. A digital still camera, comprising:
an image sensor mounted in a housing for receiving light and generating output signals representative of an image of an object or a scene of interest;
a processing circuit mounted in the housing and connected to the image sensor for processing the output signals from the image sensor;
a memory mounted in the housing;
a control circuit mounted in the housing and connected to the processing circuit for successively generating a plurality of image files corresponding to a plurality of images and storing the image files in the memory in accordance with a selected one of a plurality of picture modes selected from the group consisting of a plurality of picture resolutions, a plurality of data compression levels, and combinations of picture resolutions and data compression levels, the control circuit determining a remaining picture count after each image file is stored in the memory based on a plurality of look up tables each corresponding to one of the plurality of picture modes, the control circuit initially determining the remaining picture count based on a capacity of the memory before any image files have been stored in the memory and thereafter the control circuit decrementing the remaining picture count after each image file has been stored in the memory by a predetermined number each corresponding to one of a size of the image file just stored, and the control circuit causing the remaining picture count to be set to zero when the control circuit determines that a remaining capacity of the memory is insufficient to store an image file of a predetermined maximum image file size; and
means mounted in the housing for indicating the remaining picture count to a user.

21. A digital still camera, comprising:
an image sensor mounted in a housing for receiving light transmitted through a lens and generating output signals representative of an image of an object or a scene of interest;
a processing circuit mounted in the housing and connected to the image sensor for processing the output signals from the image sensor;
a memory mounted in the housing;
a control circuit mounted in the housing and connected to the processing circuit for successively generating a plurality of image files corresponding to a plurality of images and storing the image files in the memory in accordance with a selected one of a plurality of picture modes, the control circuit determining a remaining picture count by searching a look up table; and
means mounted in the housing for indicating the remaining picture count to a user.

22. The camera of Claim 21 wherein the look up table is searched in a linear fashion.

23.   The camera of Claim 21 wherein the look up table is searched in a binary
2   fashion.

24.   The camera of Claim 21 wherein the control circuit determines the remaining
2   picture count by performing a logical AND operation between a pair of memory addresses.

25.   The camera of Claim 21 wherein the look up table includes a plurality of
2   different free memory space values and the look up table is searched after each image file is
generated to locate a pair of free space memory values that bracket an actual free memory space
4   value determined by the control circuit based on the size of each image file that is stored.

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